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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/031,184	01/16/2002	Edward E Beeles	HISHE-56781	2542
James W Paul Fulwider Patton Lee & Utecht Howard Hughes Center 6060 Center Drive Tenth Floor Los Angeles, CA 90045				
EXAMINER				
SAUTHER, FLEMMING				
ART UNIT		PAPER NUMBER		
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/031,184

Applicant(s)

BEELES ET AL.

Examiner

Flemming Saether

Art Unit

3677

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 27-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 27-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE/US)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 103

Claims 27, 28 and 31-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Briles (US 3,550,498) in view of Bogatz (US 6,283,691) and further in view of Dixon (US 4,867,625) and Garvey (US 4,979,279). Initially, it should be noted that although Briles shows a nut, it is disclosed "the invention may be embodied in a swage-collar type of nut in the same manner as in the threaded type of nut" (column 9, line 44-45). In that regard, Briles discloses a swage fastener system in combination with a composite assembly of workpieces (62) comprising a pin (54) and a collar (12, 14). The pin includes a threaded (60) and non-threaded portion (56, 58). The collar includes an outwardly flared end portion (20) and a main central bore (at 24) with a shoulder having a larger diameter receiving a sealing insert (16). The sealing insert is deformable so that upon installation it interfaces with the unthreaded and threaded portion of the pin and a workpiece to form a seal (see Fig. 4). The nut is made of a metal and since it discloses a "swage" collar, by definition it would be deformable. Briles disclose the sealing insert to be made of tetrafluoroethylene (TEFLON, column 7 line 69). In Briles, the "collar" is read to be inclusive of the member (14) and as such the sealing insert is "tightly sealed" entirely within the collar in the installed condition (see Fig. 4) in engagement with the fastener and a base portion (32) contacts the workpiece. The member (14) is disclosed, as not being required thus the collar being unitary in that it would be formed as a single piece. The unitary collar has a flat even surface between any two of the channels 52. By virtue of the channels (52), Briles fails to disclose a continuous annular well where the insert has an external diameter no

greater than diameter of the well. Bogatz discloses a fastener (12) having a continuous annular well (16) receiving a sealing insert (48) configured such that the external diameter of the insert is no larger than the continuous well. At the time the invention was made, it would have been obvious for one of ordinary skill in the art to make the annular well of Briles continuous and sealing insert having an external diameter no greater than the well as disclosed in Bogatz because Bogatz discloses a superior configuration which prevents the failure of the sealing member as is discussed in Bogatz. Modified Briles does not disclose the collar having a smooth rounded external surface prior to being swaged nor the swage tool having a smoothly rounded neck down portion. Dixon discloses a swage collar (14e) having a flange (10e) where it is shown the transition to the flange is formed as a smooth rounded concave portion (see Fig. 9) and the swage tool is (54e) is shown to have an entrance aperture slightly larger than a smaller diameter end of the collar (see Fig. 2) which necks down smoothly to a convex rounded neck portion (see Figs. 1 and 2) which is used for swaging the collar. At the time the invention was made, it would have been obvious for one of ordinary skill in the art to swage the collar onto the pin in Briles by a process as disclosed in Dixon for its recognized efficiency. The smooth surfaces facilitating the swaging operation by allowing for the material to flow efficiently when swaged without the formation of localized areas of stress as would occur at sharp transitions thus making for a stronger fastener. Garvey is added to show a swaging tool including an outer nut (58) engaged with an anvil (60) which is located at least partly within the outer nut and since both are circular they would be rotatable relative to one another and an outer sleeve (62)

threadedly engaged with the nut. The outer sleeve extends to the end of the anvil (opposite the nut). Furthermore, a swage tool (26) is received in the anvil. At the time the invention was made, it would have been obvious for one of ordinary skill in the art to include in the tool of modified Briles, a nut and outer sleeve as disclosed in Garvey as a convenient connection to the remainder of the tool.

Claims 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over modified Briles as applied to claims 13, 17, 27 and 28 above, and further in view of Rath (US 4,768,910). Modified Briles does not disclose the collar made of aluminum or titanium. Rath disclose a swage collar and teaches it could be made of aluminum or titanium (column 2, line 61-64). At the time the invention was made, it would have been obvious for one of ordinary skill in the art to make the collar of Briles out of aluminum or titanium as disclosed in Rath in order to make the collar lighter and stronger restively. Lighter and stronger collars would be desirable in applications such as aerospace.

Response to Remarks

Applicant's remarks have been considered but, even as amended the claims are still broad enough that the reference to Dixon and Garvey can read on the features added by the amendment. Specifically, Dixon's Fig. 1 shown the entrance of the swage tool (56) to have a diameter larger than the diameter of the smaller end of the collar and a smooth rounded convex surface extending therefrom for deforming the collar (see Fig.

Art Unit: 3677

2). Additionally, in Garvey the anvil can be interpreted as the element labeled (60) so that at least a portion of the swage tool (analogous to 26 in Garvey) is within the anvil.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Flemming Saether whose telephone number is 571-272-7071. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Victor Batson can be reached on 571-272-6987. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Flemming Saether
Primary Examiner
Art Unit 3677

/Flemming Saether/
Primary Examiner, Art Unit 3677